AMENDMENTS TO THE CLAIMS

1.   (currently amended) An apparatus for performing a pilot synchronization operation in a wireless communication system, the apparatus comprising:

a plurality of sliding correlators that each receives a portion of a received correlation sequence and provides a partial correlation output;

a plurality of absolute value blocks that take a respective absolute value of each partial correlation output; and

circuitry that combines the absolute values of each of the absolute value outputs to form a correlation ~~output.~~ output;

wherein a linear relation of the absolute values for each partial correlation output is used to perform pilot synchronization in the presence of a large frequency offset.

2.   (original) The apparatus set forth in claim 1, wherein each of the plurality of sliding correlators receives a portion of a stored correlation sequence for comparison to the portion of the received correlation sequence.

3.   (original) The apparatus set forth in claim 1, wherein the correlation output comprises a correlation peak.

4.   (currently amended) The apparatus set forth in claim 3, wherein the correlation peak corresponds to a primary synchronization channel ~~channel~~.

5.   (currently amended) The apparatus set forth in claim 3, wherein the correlation peak corresponds to a secondary synchronization channel ~~channel~~.

6.   (original) The apparatus set forth in claim 1, wherein the apparatus comprises a portion of a code division multiple access receiver.

7.   (original) The apparatus set forth in claim 1, wherein the apparatus comprises a portion of a receiver that complies with the Universal Mobile Telecommunications System ("UMTS") Wideband Code Division Multiple Access ("WCDMA") standard.

8.   (original) The apparatus set forth in claim 1, wherein the apparatus comprises at least a portion of a cell search block.

9.   (currently amended) A code division multiple access ("CDMA") receiver, comprising:

an analog-to-digital converter that receives a CDMA signal and converts the CDMA signal into a digital signal:

a matched filter that filters the digital signal to produce a filtered digital signal;

a tapped delay line that receives the filtered digital signal and produces a delayed filtered digital signal; and

a cell search block, comprising:

a plurality of sliding correlators that each receives at least a portion of the delayed filtered digital signal and provides a partial correlation output;

an absolute value block that takes the absolute value of each partial correlation output; and

circuitry that combines the absolute values of the absolute value block to form a correlation ~~output.~~ output;

wherein a linear relation of the absolute values for each partial correlation output is used to determine synchronization channel timing in the presence of a large frequency offset.

10.   (original) The CDMA receiver set forth in claim 9, wherein each of the plurality of sliding correlators receives a portion of a stored correlation sequence for comparison to the portion of the received correlation sequence.

11.   (original) The CDMA receiver set forth in claim 9, wherein the correlation output comprises a correlation peak.

12.   (currently amended) The CDMA receiver set forth in claim 11, wherein the correlation peak corresponds to a primary synchronization channel ~~channel~~.

13.   (currently amended) The CDMA receiver set forth in claim 11, wherein the correlation peak corresponds to a secondary synchronization channel ~~channel~~.

14.   (original) The CDMA receiver set forth in claim 9, wherein the apparatus comprises a portion of a code division multiple access receiver.

15.   (original) The CDMA receiver set forth in claim 9, wherein the CDMA receiver complies with the Universal Mobile Telecommunications System ("UMTS") Wideband Code Division Multiple Access ("WCDMA") standard.

16.   (currently amended) A method for forming a correlation output in a wireless communication system, the method comprising:

    receiving a correlation sequence to produce a received correlation sequence;

    segmenting the received correlation sequence into a plurality of partial correlation sequences;

    comparing each partial correlation sequence to a portion of a stored correlation sequence;

    producing a partial correlation output based on the comparison of each partial correlation sequence to the corresponding stored correlation sequence;

    determining the absolute value of each partial correlation output; and

    combining the absolute values of each of the partial correlation outputs to form a correlation ~~output.~~ output;

    wherein a linear relation of the absolute values for each partial correlation output is used to perform correlation in the presence of a large frequency offset.

17.   (original) The method set forth in claim 16, comprising identifying a correlation peak in the correlation output.

18.   (currently amended) The method set forth in claim 17, comprising identifying a primary synchronization channel ~~channel~~ based on the correlation peak.

19.   (currently amended) The method set forth in claim 17, comprising identifying a secondary synchronization channel ~~channel~~ based on the correlation peak.

20.   (original) The method set forth in claim 16, wherein the recited acts are performed in the recited order.